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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/904,981	07/12/2001	Feng Gao	CHRT-99203.DIV	3778

7590

05/05/2004

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EXAMINER

ROSE, ROBERT A

ART UNIT

PAPER NUMBER

3723

DATE MAILED: 05/05/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/904,981

Applicant(s)

GAO, FENG

Examiner

Robert Rose

Art Unit

3723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 34-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 34-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-33 have been canceled.
2. Claims 34-39 are presented for examination.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 34-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans et al(US 5897424) in view of Yu(US 5435772). Evans et al disclose a polishing apparatus comprising substantially all of the subject matter set forth in applicant's claims above, except for the recitation in claim 34 of a wafer carrier overlying the polishing pad. Note the embodiment of Figures 4-5 showing a backup platen having a tapered peripheral surface, which causes the upper surface of the polishing pad to be tapered. Note also U-shaped and V-shaped polishing surfaces of Figures 2A and 2B. Yu discloses a polishing apparatus having a polishing pad with a peripheral region characterized as tapered and horizontal, and having an overlying wafer carrier for applying the wafer to the polishing surface under a controlled pressure. Note figures 3-4 of Yu. To simply provide a wafer carrier in the apparatus of Evans et al overlying the polishing pad, in order to apply the wafer to the polishing pad at a controlled pressure for better control of the polishing process, would have been obvious in view of Yu.
4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Satou is cited of interest to show a polishing pad with a stepped peripheral cross-section.

5. Applicant's arguments filed February 9, 2004 have been fully considered but they are not persuasive. Applicant has argued that neither Evans et al nor Yu et al disclose all of the features set forth in the claims as now amended. However, Evans et al does disclose the pad structure as broadly recited in amended claim 34, and Yu teaches the expediency of providing a carrier for the work overlying the polishing pad. Such use of a wafer carrier to control the pressure of the work against the polishing surface is old and well known in the wafer polishing art, and to have employed such a wafer carrier in the apparatus of Evans et al would have been obvious in view of Yu.

6. In view of the new grounds of rejection not necessitated by applicant's response, this action is not made final.

7. Any inquiry concerning this communication should be directed to Robert Rose at telephone number (703) 308-1360.

rr

April 30, 2004.

A handwritten signature in black ink, appearing to read "Robert Rose", is located below the date.